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ART. 18. SYSTEMATIC NOTES ON NORTH AMERICAN BIRDS

1. The Herons and Ibises (Ciconiiformes)

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This is the first of a series of papers on the systematics and nomenclature of certain North American birds. Most of the research was done between 1947 and 1952, in connection with a study of the taxonomy of the birds of New York submitted to Cornell University as a Ph.D. thesis. This work was based primarily on the specimens in the collections of Cornell University and the American Museum of Natural History, supplemented by specimens borrowed from or seen at various other museums. I have subsequently checked many of my findings with the material available at Carnegie Museum, and have consulted pertinent recently published literature. At the end of this first paper will be found a list of the institutions and individuals to whom I am indebted for loans of specimens or for other help and advice.

1. *Ardea herodias*

I have not encountered in the literature the suggestion that the Great Blue Heron (*Ardea herodias*) be considered conspecific with the Gray Heron (*A. cinerea*) of the Old World, but I can find no important reason why this step should not be taken. Lowe (1954: 16) has come closest by describing *herodias* as "a replacing species so closely related [to *cinerea*] that it is most probably a subspecies which has achieved specific rank, the two together forming a 'superspecies'." The two are obvious geographic representatives (See maps, Lowe, 1954: 26-27). Judging from descriptions in the literature, from photographs, and from accounts of those of my friends who have seen *cinerea* in life, the habits, behavior and general appearance in nature of the two herons are all very much alike. The well known *A. c. cinerea* is substantially smaller than most races of *A. herodias*, but the large *A. c. firsas* of Madagascar equals or exceeds in size some of the smaller American races. The most striking color difference involves the presence of much rusty in the plumage of *herodias*, the equivalent areas of *cinerea* being white or gray. This color is, however, geographically variable, the rusty being much paler in some subspecies than it is in the northeastern *A. h. herodias*. Although adult *cinerea* is whiter than adult *herodias*, and lacks the rusty color entirely, the immature *cinerea* shows some rusty in exactly the places where it appears in adult *herodias*. In turn, the immature *herodias* is more rusty than the adult, possibly indicating that the rusty color is a more primitive condition in this group of birds, and that the American forms are nearer in color to the basic stock from which both *herodias* and *cinerea* arose.

The question of nomenclature now arises. If the Gray and Great Blue Herons are to be considered as one species, what shall the specific name be? Linnaeus named both on the same page (*Systema Naturae*, ed. 10, 1, 1785: 143). Although, as correctly shown by Amadon (1955), revisers are not obligated by the International Rules of Zoological Nomenclature to recognize line anteriority, it is convenient to do so, all other things being equal.



In this instance the name *cinerea* appears on the page before the name *herodias*, so as first reviser I designate *cinerea* as the name for the combined species. This treatment conforms with the nomenclature of most holarctic species; with few exceptions (e.g., *Falco columbarius*, *Loxia leucoptera*) the nominate subspecies is an Old World form (e.g., *Falco peregrinus*, *Loxia curvirostra* and many others). The subspecies of the Great Blue Heron would thus be listed as subspecies of *Ardea cinerea*, the northeastern race for example being known as *Ardea cinerea herodias* Linnaeus.

2. *Casmerodius albus*

Berlioz (1949: 27) advocated placing this species in the genus *Egretta* (type, *Ardea garzetta* Linnaeus), and this treatment is followed in much of the modern European literature. While I favor the expansion of the genus *Egretta* (See below), I feel that *Casmerodius* is out of place in this assemblage. The species of *Egretta* are all small, slender herons, while *Casmerodius* is a much larger, heavier bird, with a longer neck in proportion to body size. There are certain differences in feathering; *Casmerodius* lacks the occipital nuptial plumes typical of *Egretta*, but has the lower mandible more extensively feathered than do any of the smaller species. Several species in the genus *Egretta* (as expanded by several modern authors) are dimorphic, with both white and colored phases; *Casmerodius* is never, to my knowledge, dimorphic. In its appearance in life, *Casmerodius* has always reminded me more of *Ardea* than of *Egretta*, and it is interesting to note that Adams (1955: 60) has found at least one skeletal component, the ectethmoid bone, in which *Casmerodius* does, indeed, agree with *Ardea* rather than with *Egretta* ("*Leucophoyx*" of Adams's paper). All in all, I believe that the retention of the genus *Casmerodius*, even though it is monotypic, is justified.

3. "*Leucophoyx*" *thula*

I agree with Berlioz (1949: 22) that there is no justification for the recognition of a monotypic genus, *Leucophoyx* Sharpe, for the Snowy Egret of the New World. This species and *Egretta garzetta* of the Old World might well be considered members of a single superspecies. The only significant difference between the two lies in the structure of the nuptial plumes, especially those of the occipital region. In *thula* these are dissected and recurved, while in *garzetta* they are narrow and ribbon-like. There is also a difference in size, *garzetta* being somewhat larger. There is no basis here for a generic separation, and I advocate the use of the combination *Egretta thula* (Molina) for the Snowy Egret.

4. *Florida caerulea*

If the genus *Egretta* is to be expanded to include the Reef Herons (*Demiegretta*), as in some recent publications (cf. Smythies, 1953: 530), I believe that serious consideration should be given to the inclusion of the Little Blue Heron (*Florida*) as well. The plumage of the dark color phase of *Demiegretta sacra* is not unlike that of adult *Florida caerulea*, both in color and texture. The Little Blue Heron is unique in that its white plumage is restricted to immature birds, but this should not be enough to

exclude it from an expanded genus *Egretta*. The close relationship of these genera is emphasized by the hybrid *caerulea* × *thula* described by Sprunt (1954).

Judging by the names used in recent publications, there is much division of opinion as to the need for recognition of two subspecies of the Little Blue Heron. Those who recognize two races use the name *Ardea caerulescens* Latham (Index Ornithologicus, 2, 1790: 690), type locality Cayenne, for birds of Mexico and the West Indies south through South America, following the original suggestion of Riley (1904:279). Among the advocates of this division have been Wetmore (1927: 294) and de Schauensee (1948: 360). Friedmann, Griscom and Moore (1950: 29) called Mexican specimens *F. c. caerulea*, indicating their support of the division by the use of the trinomial, while they pointed out in a footnote the confusion existing with respect to the identification of Little Blue Herons from Mexico and Central America. Authors opposed to the subspecific division include, among others, Todd (1916: 180), Peters (1929: 133) and Hellmayr and Conover (1948: 191, footnote).

As suggested by Todd (1916: 180), individual variation in color in adult Little Blue Herons is most impressive. I have made direct color comparisons of adults from New York, Virginia, Florida, Louisiana, Texas, Cuba, Puerto Rico, Antigua, St. Lucia, the Grenadines, Sinaloa, Panama, Colombia, Venezuela, Ecuador and the Guianas. I find no correlation between color variation and distribution. On this account I reject the supposed darker subspecies *caerulescens* and use a binomial for the Little Blue Heron.

5. *Butorides virescens*

The Green Herons of the *virescens* group and the Striated Herons of the *striatus* group have been listed as separate species by most if not all modern authors, although reluctantly so by Hellmayr and Conover (1948: 184, footnote). There is much uncertainty as to their status in areas where their respective ranges supposedly overlap. The data from Barro Colorado Island, Panama Canal Zone, presented by Van Tyne (1950: 5) and Eisenmann (1952: 12) suggest that intergradation between the two groups may take place in that area. The two forms are also reported to meet on Margarita Island, off the coast of Venezuela. Lowe (1907: 554-555) believed the subspecies *robinsoni* of Margarita to be a connecting link between *striatus* and *virescens*. He used the name *Butorides virescens robinsoni*. Since *striatus* and *virescens* were first named by Linnaeus on the same page (Systema Naturae, ed. 10, 1, 1758: 144), the first reviser has the privilege of selecting a specific name for the combined group. I consider that this was done by Lowe; if further study shows that combining the two species is indeed justified, the races of *striatus* will become races of *virescens*.

The well known *Butorides virescens virescens* occupies a vast area extending from South Dakota to Chiapas and from New Brunswick to Florida. In view of the great plasticity exhibited by this genus elsewhere in its range, there is surprisingly little geographic variation within the range of *virescens*. In making direct comparisons of birds from New York, Pennsylvania, Ohio,

Maine, Virginia, North Carolina, Georgia and Florida, I have found no appreciable differences correlated with distribution. I have not examined Mexican specimens.

6. *Botaurus lentiginosus*

Meinertzhagen (1951: 446) considered all of the bitterns of the genus *Botaurus* (including the Australian *poiciloptilus*, the nearctic *lentiginosus* and the neotropical *pinnatus*) as conspecific with the palearctic *stellaris*. This is certainly carrying "lumping" to an unwarranted extreme. The North American Bittern differs from *stellaris* in many important particulars, including courtship patterns, voice, type of plumes, proportions, color pattern, etc. Some members of the family Ardeidae which are currently placed in separate genera actually appear to be more closely related to one another than are *Botaurus stellaris* and *B. lentiginosus*.

After careful examination of the series of bitterns in several museums, I have found no reason to justify recognition of the proposed western subspecies, *B. l. peeti* Brodkorb. The supposed difference in tarsal measurements between eastern and western birds does not hold good. There is much color variation, sex for sex, in this species, but I fail to find any geographic correlation. Certain specimens in the U. S. National Museum have been identified as "*peeti*" or "*lentiginosus*", apparently by appearance alone and without regard to distribution. This has resulted in a rather anomalous geographic arrangement, since some Florida specimens have been labeled "*peeti*" and some Baja California specimens "*lentiginosus*". In short, I can not agree with a recent statement that "western populations are different on average characteristics from eastern populations, thus validating *peeti* as a distinct subspecies" (Jewett and others, 1953: 96).

7. The genus *Plegadis*

The White-faced Glossy Ibis has long been troublesome both from nomenclatorial and taxonomic viewpoints. It was known for years as *Plegadis guarauna*, but Hellmayr and Conover (1942: 301, footnote) showed that the name *Scolopax guarauna* Linnaeus is properly applied to the Limpkin (*Aramus*). The name then reverted to *Plegadis mexicanus*. In a later volume, however, Hellmayr and Conover (1948: 265, footnote) indicated their belief that *Tantalus mexicanus* Gmelin is so poorly described as to be unidentifiable. They therefore turned to the next available name, *Numenius chihi* Vieillot, which I shall use here.

With few exceptions (cf. Amadon and Woolfenden, 1952: 2), the two forms of Glossy Ibis in North America are listed by most authors as two full species. Both are commonly supposed to breed in Louisiana, but Lowery (1947: 181-182) has shown that *falcinellus* is rare in that state, at least at the present time, and its breeding there seems to be discredited.

The two Glossy Ibises are also listed (Hellmayr and Conover, 1948: 265, 266, 269) as breeding sympatrically in Florida. The breeding specimen of *chihi* from Lake Washington reported by Brewster (1886) remains the only record from the state (Howell, 1932: 117). It is, however, a definite breeding record, based on a female taken with a set of eggs. I have examined the

specimen (through the courtesy of Raymond A. Paynter, Jr., of the Museum of Comparative Zoölogy), and it appears to be a perfectly typical example of *chihi*. This is the only record known to me of either Glossy Ibis breeding within the range of the other; the thought is inescapable that this single record is insufficient evidence upon which to base statements that the breeding ranges of the two forms overlap and that therefore they must represent two species. Both forms of Glossy Ibis are notorious wanderers, and have been taken in localities far from their normal ranges. If *chihi* can wander as far as western New York, as it has upon at least two occasions, it is certainly not inconceivable that a female of this form may have wandered to Florida and remained to breed in a colony of *falcinellus*. It happens that we have definite evidence that these two ibises are completely interfertile. An editorial note which appeared, appropriately enough, in *The Ibis* (1905: 294) mentions the fact that two flocks in the London Zoo, *chihi* from Argentina and *falcinellus* from Spain, freely interbred for many years. There seems to be no good reason why the two forms should not be considered conspecific, the White-faced Glossy Ibis to be known as *Plegadis falcinellus chihi* (Vieillot).

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ACKNOWLEDGMENTS

Specimens from the following institutions have been used during the course of my taxonomic studies on North American birds:

- American Museum of Natural History, New York, N. Y.
- Buffalo Museum of Science, Buffalo, N. Y.
- Carnegie Museum, Pittsburgh, Pa.
- Chicago Natural History Museum, Chicago, Ill.

Cornell University, Ithaca, N. Y.

Manitoba Museum, Winnipeg, Manitoba.

Minnesota Museum of Natural History, Minneapolis, Minn.

Museum of Comparative Zoölogy, Cambridge, Mass.

Museum of Vertebrate Zoology, Berkeley, Calif.

Museum of Zoology, University of Michigan, Ann Arbor, Mich.

National Museum of Canada, Ottawa, Ontario.

New York State Museum, Albany, N. Y.

Philadelphia Academy of Natural Sciences, Philadelphia, Pa.

Rochester Museum of Arts and Sciences, Rochester, N. Y.

Royal Ontario Museum of Zoology and Palaeontology, Toronto, Ontario.

Teachers College, Fredericton, New Brunswick.

United States Fish and Wildlife Service, Washington, D.C.

United States National Museum, Washington, D.C.

Specimens were also borrowed from the personal collections of C. Edward Addy, Richard B. Fischer, A. G. Lawrence, George M. Sutton and Sam Waller. To the curators of all of the above institutions, and to the individuals from whom specimens were borrowed, I wish to express my sincere gratitude.

Certain individuals other than staff members of the institutions listed above have been particularly helpful in gathering specimens or information for me, or in throwing light on particular problems. Thanks are especially due to the following: Heman P. Adams, Kile R. Barbehenn, Allen H. Benton, Frances L. Burnett, F. Graham Cooch, Robert W. Dickerman, William C. Dilger, Stephen W. Eaton, Ernest P. Edwards, Eugene Eisenmann, Richard B. Fischer, Winfred N. Ford, Jr., Robert Goodwin, Karl Haller, Paul M. Kelsey, Brina Kessel, Daniel Marien, Paul S. Martin, Marjorie Crimmings McBride, Harry C. Oberholser, Allan R. Phillips, Edgar M. Reilly, Jr., C. Richard Robins, Louie Wilson Schubert, Robert C. Van Etten and Glen Woolfenden.

The original research upon which this series of papers is based was carried out under the direction of Professors Arthur A. Allen, Robert T. Clausen and Edward C. Raney, of Cornell University. I am indebted to them for their interest and guidance.